Comments on the TOR clearance application for Jidu HEP (92MW) in Upper Siang District of Arunachal Pradesh

The Jidu hydropower project with 92 MW (3x30.66MW) installed capacity will be considered for ToR clearance in the 69th meeting of EAC to be held on 11-12 November, 2013. This project is being constructed on the Yang Sang Chhu River, tributary of Siang River in Upper Siang District of Arunachal Pradesh. The government of Arunachal Pradesh has signed a MoA with Meenakshi North East Power Private Limited of Hyderabad to construct the Jidu HEP.

Salient Features Jidu hydropower project is located in the upstream of Siang river basin bordering with China. Though the name of the project is Jidu, the village is located 7 km far from the power house of the project. After Siang River entering India at Gelling, the Yang Sang Chhu River is the first major tributary which meets the Siang River at Jiri. The catchment area of the project is 1,211 sq km. The height of the barrage is 20 m from river bed level and the full reservoir level is El. 640.0 m. The HRT of the project is 4.06 km long and 6.0 m in diameter. This project will have a surface power house and the tail race channel of the project is 100 m long. The total estimated cost of this project is Rs 732.8 crores. For Jidu HEP the project proponent had deposited a sum of Rs 1.38 cr in July 2011 with Arunachal Pradesh Govt. This implies that per megawatt upfront premium was Rs 1.5 lakh for the project, upfront premium is an undesirable practice.

Delay Uploading the Necessary Documents in MoEF website The PFR document of the project was uploaded on the website on 7th November 2013, just four days before the project being considered by EAC. The necessary documents should be uploaded at-least two weeks before any EAC meeting.

Incorrect River Name The name of the river has not been mentioned correctly in the whole Form I. The name of the river is actually Yang Sang Chhu and not Yang Chan River. This can be found the interim EIA report of Siang river basin submitted to CWC in June 2012.

Critical Issues in Form I

No Information about the Forest under Project Area The Form states that the project area is covered with dense forest but it does not have any assessment of how much forest area will be affected and waits for the DPR to complete. In serial no 23 of page 3 the document states "The total area of forest land involved in the project will be identified during DPR stage." Again in section 1.2 of page 5 it states "The land required for the project belongs to forest/ community/ private land. Detailed classification of the required land will be finalized at DPR stage."

Submergence Area of the Project Needs more Details The Form I states that the submergence area of this project is approximately 1 ha since 70% of the area is part of the river course in section 1.2 of page 5 which seems doubtful and needs further details.

Ignoring the impacts of solid waste Replying to question no 1.15 of page 7 the Form I, the project proponent is wrong in stating that " change is land use is envisaged, but no impact is anticipated on water body and land due to disposal of solid waste/ sewage." In the pristine and sparsely populated area where this project is proposed disposing of solid waste will surely have negative impacts.

Incorrect Estimation of Influx of People In Sl. No 1.28 of page 9, the temporary influx of 500 people (100 supervisory staff, 100 skilled labour and 300 unskilled labour) does not seem correct. There will be influx of larger number of people than 500. Smaller projects like Simang I and II on the Simang river in the same Siang basin stated in its EIA an influx of 1000 person per project. Besides, this is the not the only hydropower project in the Siang basin, therefore the cumulative impact of influx of people is very necessary to take into account.

If No Assessment Done then How Come 80 ha land is required for Project In question no. 2.1 of page 10 I was mentioned that the land required for the project is approximately 80 ha and which is stated to be underdeveloped. This seemed contradictory with the previous statement at the beginning of the Form I which said that the measurement of the land required for the project is yet to be done.

Assessment of Rock Crushing in Pristine Hills Reply to question no 2.4 in 10 states that "Sand/Aggregate will be made available by crushing rock from identified quarry sites." Since this will be located in a dense forest area and in fragile eastern Himalayas the impacts of this activity must be assessed.

Undermining the hydropower projects in larger Siang Basin The reply to Q 9.4 in page 16 (Have cumulative effects due to proximity to other existing or planned projects with similar effects) does not state the actual situation. Replying positively to this question the project proponent stated "There is no ongoing / proposed project on 10 km upstream and downstream of Jidu project. Thus, there will be no cumulative effect." But there are 33 hydropower projects planned in the Siang river basin as stated in the Interim EIA report of Siang Basin of June 2012. The project impact must be seen in the context of cumulative impact of all these projects in the downstream as well in the densely forested hills of Siang basin must be thoroughly assessed.

No mention of Bio-diversity and Aquatic life The Form I doesn't mention about the impacts of the projects on the aquatic life and bio diversity.

Detail map of Larger Siang Basin Since this project is located in the upper reaches of Siang River, the project should provide a detailed map of whole Siang basin along with other the projects planned in the basin.

The ToR for the EIA of Jidu project must include -

1. Environment flow assessment

2. Options Assessment
3. Impacts of climate change which is very important keeping in mind the location of the project
4. Impacts of peaking power generation
5. Impacts of sedimentation on the project and the flushing out of sediment from the project to downstream
6. Impact of mining of materials for the project.
7. Impact of project on climate change adaptation capacity of the people and region in the context of climate change.
8. Since the project area is under dense forest cover and also located in the close vicinity of Dihang-Dibang biosphere reserve, the EIA must assess if any flora or fauna in the project area falls under endangered categories as specified by the IUCN Red list.

Why MoA is a part of Form I It is very clear from above, that the project proponent has not done a proper assessment of project area and that's why the proponent has included the MoA (Memorandum of Agreement) signed between Arunachal Pradesh government and project proponent was made a part of Form I which unnecessarily increased the size of the document.

Critical Issues in PFR(Preliminary Feasibility Report)

For the Jidu HEP both Form I and PFR document was submitted in August 2013 but there are several contradictions between these two documents. The PFR states that the length of the TRC is 250 m instead of 100 m as mentioned in the Form I.

Besides many of the significant aspects of the project such as the dam wall height, seems not to be confirmed yet and mentioned as an approximation in the PFR document (section 9.1.1 page 44). This implies that the height of the dam wall may also increase after the clearance is given, with such uncertainties, the scoping clearance cannot be given.

No Detailed Investigation done on Ground From the statements made in Section 2.1 of page 14 it seems the project proponent is yet to do a site visit and understand the area. There may be change in the location of the power house and barrage site after 'detailed investigation'. Asking for a scoping clearance to construct a project in such a ecologically fragile area without even doing a detailed study is really a pathetic job done on the part of the project proponent. This project in this situation should not even be considered for scoping clearance by the EAC.

Non-availability of data for Jidu In the section 1.3 on Hydrology in page 7 the PFR states "The water availability for the project has been derived on the basis of water availability considered in the proposed Siang Middle HE Project located in on the Siyom river in the catchment of Siang." In the right next paragraph it again states "In the absence of much information about the discharge and rainfall data in the catchment, water availability of pre-feasibility study, for the proposed project has been computed on the basis of water availability study done for Siang Middle HE Project." The Jidu HEP is much upstream of the

middle Siang project. So, it was not understood why water availability of Middle Siang is taken into account here.

Dam Catchment area cannot be greater than River Catchment Area If the catchment area of the river is 700 sq km how can the catchment area of the dam is 1211 sq km. This is a significant contradiction on the part of the technical aspects of the river which must be addressed adequately.

Remote Project Location will poses question on Viability The project is located in a very remote area and also far from more widely known places of Arunachal. In fact the project 289 km far from Upper Siang district headquarter Yingkiong as stated in the PFR. The roads are not all year motorable and the construction of road networks will also take time. Besides, road networks also cannot be depended all the time since Arunachal is a very landslide prone state. In such a situation carrying material for the project would a challenging task which may lead to delays and escalation of project costs. In such a situation the viability of the project must be seriously reevaluated.

Impacts of Excavation not mentioned In Chapter XI the PFR report details about the construction activity where details of huge excavation plans have been mentioned. But there have been no mention what will be probable implication of this kind of huge excavation in a fragile hill range. This again shows that the project has only been planned on paper without any significant attempt to understand the ground realities.

Confusion Regarding Cost of Per Unit Electricity Produced The PFR document is not certain about the cost of the electricity which will be generated from the Jidu project. The cost of per unit electricity has been mentioned differently in different parts of the document. In section 12.1 of chapter XIII in page 68 of the PFR document mentioned "Sale price of energy generated at powerhouse bus bars has been worked out as 3.89 Rs./ unit with free power to home state." But in page 69 of the same chapter it is said "The levellised tariff of the Project at present day cost works out to be Rs. 2.82 Per Unit."

Parag Jyoti Saikia (meandering1800@gmail.com)